

### REMARKS

By this amendment, claims 19 and 34 have been amended. Claims 19-26, 34, and 35 are pending in the application. Applicants reserve the right to pursue the original claims and other claims in this and other applications.

Claims 19, 22, 34, and 35 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Miyake et al. (US 5,428,472). This rejection is respectfully traversed.

Claims 19 and 34 recite, *inter alia*, “a plurality of grating regions, each of the grating regions having a grating with a ... pitch ..., wherein at least one of said plurality of grating regions has a variable pitch and a variable groove width” (emphasis added). Miyake et al. does not teach or suggest this limitation. To the contrary, Miyake et al. discloses “three regions 7a, 7b and 7c having different grating pitches  $d_{11}$ ,  $d_{12}$  and  $d_{13}$  are formed and gratings formed ... have the same sectional configuration ..., i.e., the same groove width  $L$ , groove depth  $t$  and groove tilt angle  $\theta$ , while the differences among the grating pitches  $d_{11}$ ,  $d_{12}$  and  $d_{13}$  are determined by the differences among the land widths  $M$ .” Col. 12, ln. 49-58. In Miyake et al., multiple grating regions may have different pitches, but each region has a fixed pitch. There is no grating region having a variable pitch and variable groove width as recited in claims 9 and 34.

Since Miyake et al. does not disclose all the limitations of claims 19 and 34, claims 19 and 34 are not anticipated by Miyake et al. Claim 22 depends from claim 19 and is patentable at least for the reasons mentioned above. Claim 35 depends from claim 34 and is patentable at least for the reasons mentioned above. Applicants respectfully request that the 35 U.S.C. § 102(b) rejection of claims 19, 22, 34, and 35 be withdrawn.

Claim 19 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Kadowaki et al. (US 6,898,169). This rejection is respectfully traversed.

Claim 19 recites, *inter alia*, “a plurality of grating regions, each of the grating regions having a grating with a prescribed pitch ..., wherein at least one of said plurality of grating regions has a variable pitch and a variable groove width” (emphasis added). Kadowaki et al. does not teach or suggest this limitation. Kadowaki et al. discloses “diffraction grating 61.” Col. 8, ln. 46. Diffraction grating 61 is a single defined region, with the top half and lower half part of the same region 61. There is no plurality of grating regions, wherein at least one of said plurality of grating regions has a variable pitch and a variable groove width as recited in claims 19 and 34. Since Kadowaki et al. does not disclose all the limitations of claim 19 are not anticipated by Kadowaki et al. Applicants respectfully request that the 35 U.S.C. § 102(e) rejection of claim 19 be withdrawn.

Claims 20 and 23-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyake et al. in view of Shiono et al. (US 5,742,433). This rejection is respectfully traversed. Claims 20 and 23-24 depend from claim 19 and are patentable at least for the reasons mentioned above. Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of claims 20 and 23-24 be withdrawn.

Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kadowaki et al. in view of Shiono et al. This rejection is respectfully traversed. Claim 21 depends from claim 19 and is patentable at least for the reasons mentioned above. Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of claim 21 be withdrawn.

Claims 25-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyake et al. in view of Iwatsuka et al. (US 5,245,471). This rejection is respectfully traversed. Claims 25-26 depend from claim 19 and are patentable at least for the reasons mentioned above. Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of claims 25-26 be withdrawn.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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